

Mr. Joe Benko, Regional Engineer
Newton County Landfill
2266 E. 500 S. Road
Brook, IN 47922

Re: **111-14717-00017**
First Significant Permit Modification to
Part 70 No.: T 111-9725-00017

Dear Mr. Benko:

Newton County Landfill was issued a Part 70 Operating permit on March 9, 1999, for a stationary municipal solid waste landfill operation. A letter requesting a higher operating temperature for landfill gas extraction well N6 was received on August 6, 2001, with additional information received on February 25, 2002. Pursuant to the provisions of 326 IAC 2-7-12, a significant permit modification to this permit is hereby approved as described in the attached Technical Support Document.

SECTION D.1 FACILITY OPERATION CONDITIONS

D.1.4 Operational Standards for Collection and Control Systems {40CFR 60.753}

- (3) Operate each interior wellhead in the collection system with a landfill gas temperature less than 55EC and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. However, the Permittee has established a higher operating temperature. This higher operating value demonstration up to 60°C shows supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens. The Permittee may establish a higher operating nitrogen or oxygen value at a particular well.

All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Janet Mobley, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call at (800) 451-6027, press 0 and ask for Janet Mobley or extension 2 -8369, or dial (317) 232-8369.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

jm

Attachments

cc: File - Newton County
U.S. EPA, Region V
Newton County Health Department

Air Compliance Section Inspector - Wanda Stanfield
Compliance Data Section - Karen Nowak

PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

**Newton County Landfill
2266 East 500 South Road
Brook , Indiana 47922**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 and 326 IAC 2-1-3.2 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T111-9725-00017	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: March 9, 1999 Expiration Date: March 9, 2004

First Significant Source Modification No.: 111-11053-00017, issued October 26, 1999

First Administrative Amendment No.: 111-11133-00017, issued October 26, 1999

Second Administrative Amendment No.: 111-14078-00017, issued March 27, 2001

First Reopening No.: 111-13435-00017, issued April 19, 2002

First Significant Permit Modification:
111-14717-00017

Affected Pages: 26 and 27

Issued by:
Paul Dubenetzky, Branch Chief
Office of Air Quality

Issuance Date:

Newton County Landfill
Brook, Indiana

First Significant Permit Modification No.: 111-14717
Modification by: Janet Mobley

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9725-00017

Permit Reviewer: Autumn M. Marker

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] A municipal solid waste landfill with a design capacity of 7.171134 million megagrams and (4) four passive open flares rated with a maximum capacity of 200cfm each to control landfill gas. The landfill is equipped with one (1) landfill gas collection system, identified as unit 3, consisting of a skid mounted Vertical Vaporator unit and a 90 MMBtu/hr enclosed flare.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 General Provisions Relating to NSPS [326 IAC 12-1][40 CFR Part 60, Subpart A]

The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 60, Subpart WWW.

D.1.2 Municipal Solid Waste Landfill NSPS [326 IAC 12] [40CFR 60.752, Subpart WWW]

The municipal solid waste landfill has a design capacity greater than 2.5 million megagrams (Mg) and shall either comply with 40CFR 60.752 (b)(2) or calculate the non methane organic compound (NMOC) emission rate for the landfill using the procedures specified in 40CFR 60.754.

D.1.3 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

Any change or modification which may increase potential carbon monoxide emissions from the landfill gas collection system shall require prior approval from the OAM before such change may occur.

D.1.4 Operational Standards for Collection and Control Systems [40CFR 60.753]

In order to comply with 40CFR 60.752 (b)(2)(ii) the Permittee shall:

- (1) Operate the collection system such that gas is collected from each area, cell, or group of cells in the municipal solid waste landfill in which solid waste has been in place for five years if active or 2 years or more if closed or at final grade.
- (2) Operate the collection system with negative pressure at each wellhead except under the following conditions:
 - (a) Fire or increased well temperature. The Permittee shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in 40CFR 60.757(f)(1).
 - (b) Use of a geomembrane or synthetic cover. The Permittee shall develop acceptable pressure limits in the design plan.
 - (c) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the Office of Air Management (OAM).

- (3) Operate each interior wellhead in the collection system with a landfill gas temperature less than 55EC and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. However, the Permittee has established a higher operating temperature. This higher operating value demonstration up to 60° C shows supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens. The Permittee may establish a higher operating nitrogen or oxygen value at a particular well.

except that; the span shall be set so that the regulatory limit is between 20 and 50 percent of the span; a data recorder is not required; only two calibration gases are required, a zero and span, and ambient air may be used as the span; a calibration error check is not required; the allowable sample bias, zero drift, and calibration drift are ± 10 percent.

- (4) Operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the Permittee shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The Permittee may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.
- (5) Operate the system such that all collected gases are vented to a control system designed and operated in compliance with 40CFR 60.752(b)(2)(iii). In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within one hour.
- (6) Operate the control system at all times when the collected gas is routed to the system.
- (7) If monitoring demonstrates that the operational requirements in 40CFR 60.753(b), (c), or (d) are not met, corrective action shall be taken as specified in 40CFR 60.755(a)(3) through (5) or 40CFR 60.755(c). If corrective actions are taken as specified in 40CFR 60.755, the monitored exceedance is not a violation of the operational requirements in 40CFR 60.753.

Compliance Determination Requirements

D.1.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [40CFR 60.754]

- (1) Pursuant to 40CFR 60.754(b):

After installation of a collection and control system in compliance with 40CFR 60.755, the Permittee shall calculate the non methane organic compound (NMOC) emission rate for purposes of determining when the system can be removed using the following equation:

$$M_{\text{NMOC}} = 1.89 \times 10^{-3} Q_{\text{LFG}} C_{\text{NMOC}}$$

where,

M_{NMOC} = mass emission rate of NMOC, megagrams per year

Q_{LFG} = flow rate of landfill gas, cubic meters per minute

C_{NMOC} = NMOC concentration, parts per million by volume as hexane

- (a) The flow rate of landfill gas, Q_{LFG} , shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Significant Permit Modification to a Part 70 Operating Permit

Source Background and Description

Source Name:	Newton County Landfill
Source Location:	2266 East 500 South Road
County:	Newton
SIC Code:	4953
Operation Permit No.:	T 111-9725-00017
Operation Permit Issuance Date:	March 9, 1999
Significant Permit Modification No.:	T 111-14717-00017
Permit Reviewer:	Janet Mobley

The Office of Air Quality (OAQ) has reviewed a significant permit modification application from Newton County Landfill relating to the operation of a stationary municipal solid waste landfill operation.

History

On August 6, 2001, Newton County Landfill submitted an application to the OAQ requesting to raise the operating temperature for landfill gas extraction well N6 from 55°C to 60° C at their existing plant. Newton County Landfill was issued a Part 70 permit on March 9, 1999.

Existing Approvals

The source was issued a Part 70 Operating Permit T 111-9725-00017 on March 9, 1999. The source has since received the following:

First Significant Source Modification No.: 111-11053-00017, issued on October 26, 1999
First Administrative Amendment No.: 111-11133-00017, issued on October 26, 1999; and
Second Administrative Amendment No.: 111-14078-00017, issued on March 27, 2001.
First Reopening No.: 111-13435-00017, issued on April 19, 2002

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Significant Permit Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application received on August 6, 2001, and additional information submitted by the applicant on February 25, 2002.

Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Significant Permit Modification, under 326 IAC 2-7-10.5 (d)(i). Pursuant to 40 CFR 60.750 Subpart WWW the source must comply with Operation standards for collection and control systems under 40 CFR 60.753. This modification will allow a higher operating temperature to be established.

The Permittee indicated that efforts to correct the elevated temperature have been unsuccessful and are most likely naturally occurring and not a result of a fire within the landfill. Temperature readings have ranged from 130-137° at landfill gas well N6 and request that the well operating temperature be set at 140° = 60° C.

Conclusion

Proposed changes to Section D.1.4 Operational Standards for Collection and Control Systems shall be subject to the conditions of the attached proposed Part 70 Significant Permit Modification No. T 111-14717-00017.